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BUREAU OF ENTOMOLOGY.

NEWS-LETTER

OF

THE

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I N V E S T I G A T I O N S

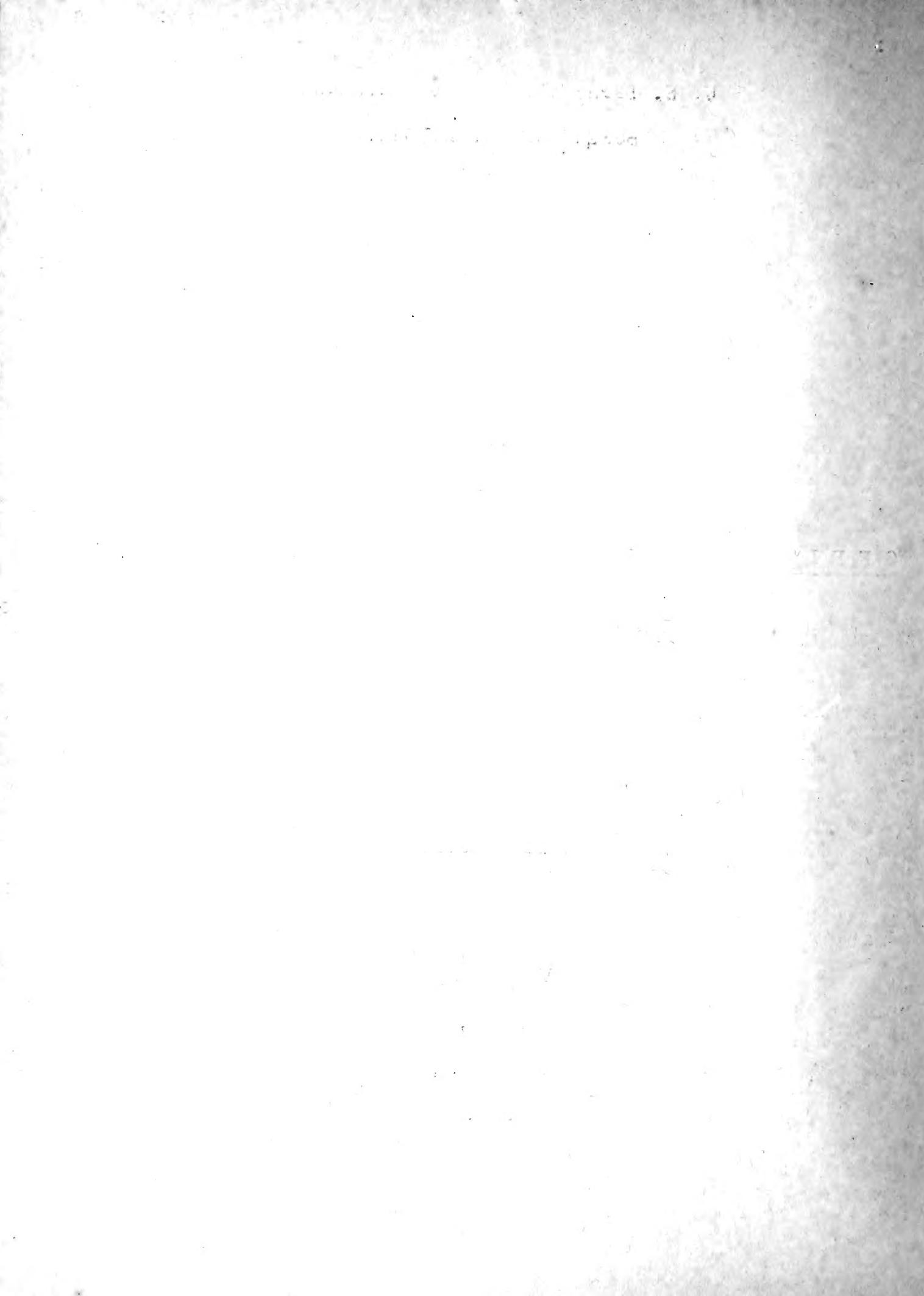
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Mr. E. R. Kalmbach of the Biological Survey has been detailed to cooperate with us in a study of the relation of birds to the range caterpillar, and has already left for New Mexico.

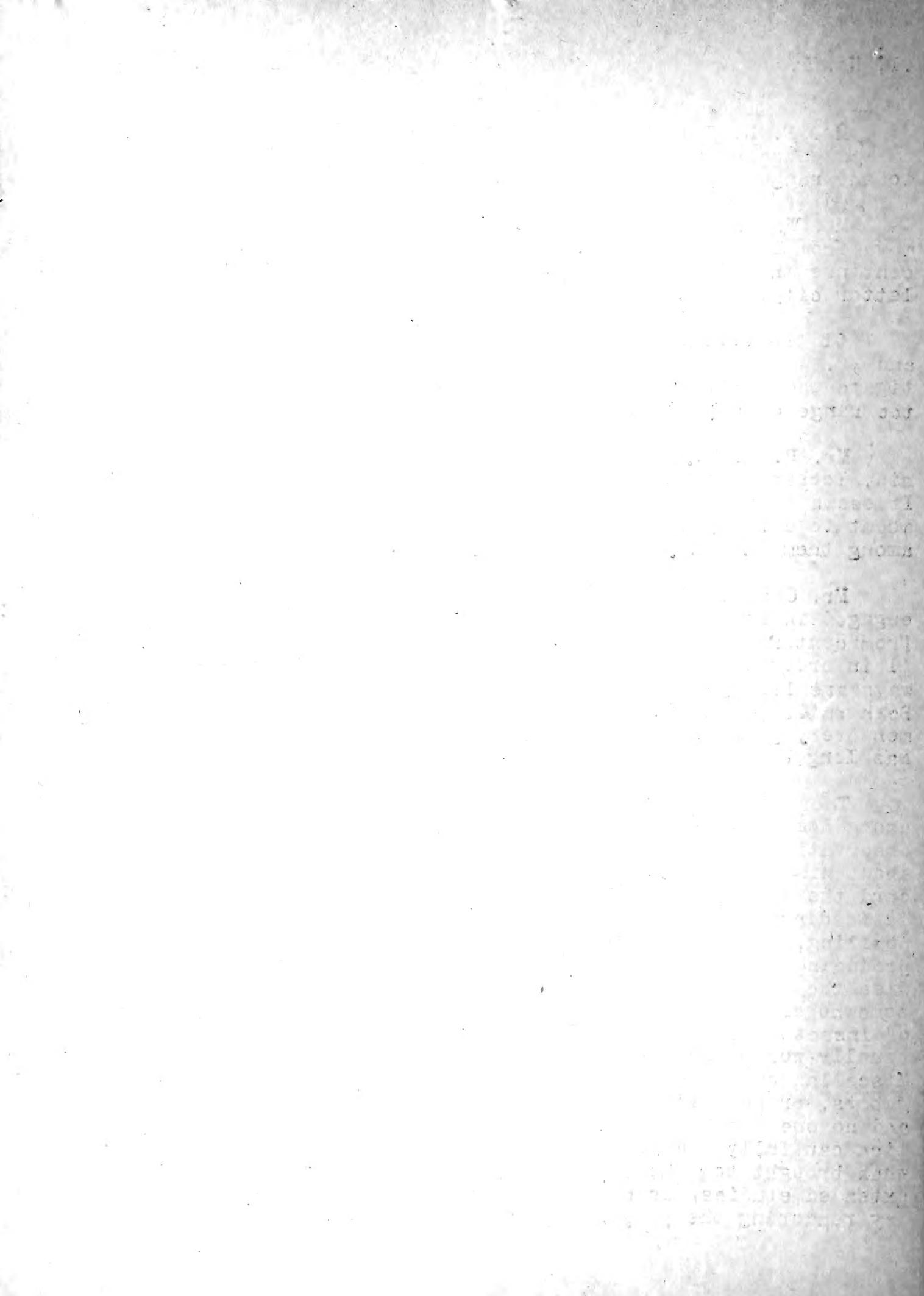
Mr. W. J. Phillips and Dr. Henry Fox will, during the month, move from La Fayette, Ind., to Charlottesville, Va., there to continue their work in a new laboratory to be established near the latter city.

Of the office force, Miss. Marshall is taking her vacation and Mr. W. R. Walton has gone to Koehler, N. Mex., to investigate the native species of Tachinidae and their relation to the range caterpillar.

Mr. R. N. Wilson has been in the Imperial Valley, California, looking after the situation relative to *Eurymus eurytheme*. It seems that just as the caterpillars of this species were about to destroy the alfalfa, a bacterial disease broke out among them and they died off in myriads.

Mr. Geo. I. Reeves has the men at work under his direction engaged in following out shipments of freight and express, made from central points in the country infested by the alfalfa weevil in order to determine if possible just to what extent the railways are likely to become instrumental in diffusing the pest. Both railway and express companies are affording himself and his men every possible facility for carrying out this work, which has long been in need of attention.

There does not appear to be a well defined understanding among some members of the force as to just what miscellaneous observations are of value, such as one can easily make in going about his other work. It is of no consequence whatever to record the simple occurrence of an insect on a plant unless it is feeding upon or otherwise affecting such plant, notably ovipositing, or, as in case of Aphididae and allied insects, reproducing and the young found to be living on the plant. Otherwise the occurrence may be due to a coincidence. They must rest somewhere. Notes on food plants, or on the habits and actions of insects that are known to attack grain or forage crops are usually worth recording unless such facts are already well known. Miscellaneous notes, intelligently made, involving food plants, habits, or natural enemies, are desirable subjects of record, and no one who has not himself prepared manuscript for publication can fully comprehend the value of these fragments, which, when brought together, often supply the missing links in more extended studies, or round out these last, frequently in this way rendering the preparation of a complete paper possible.



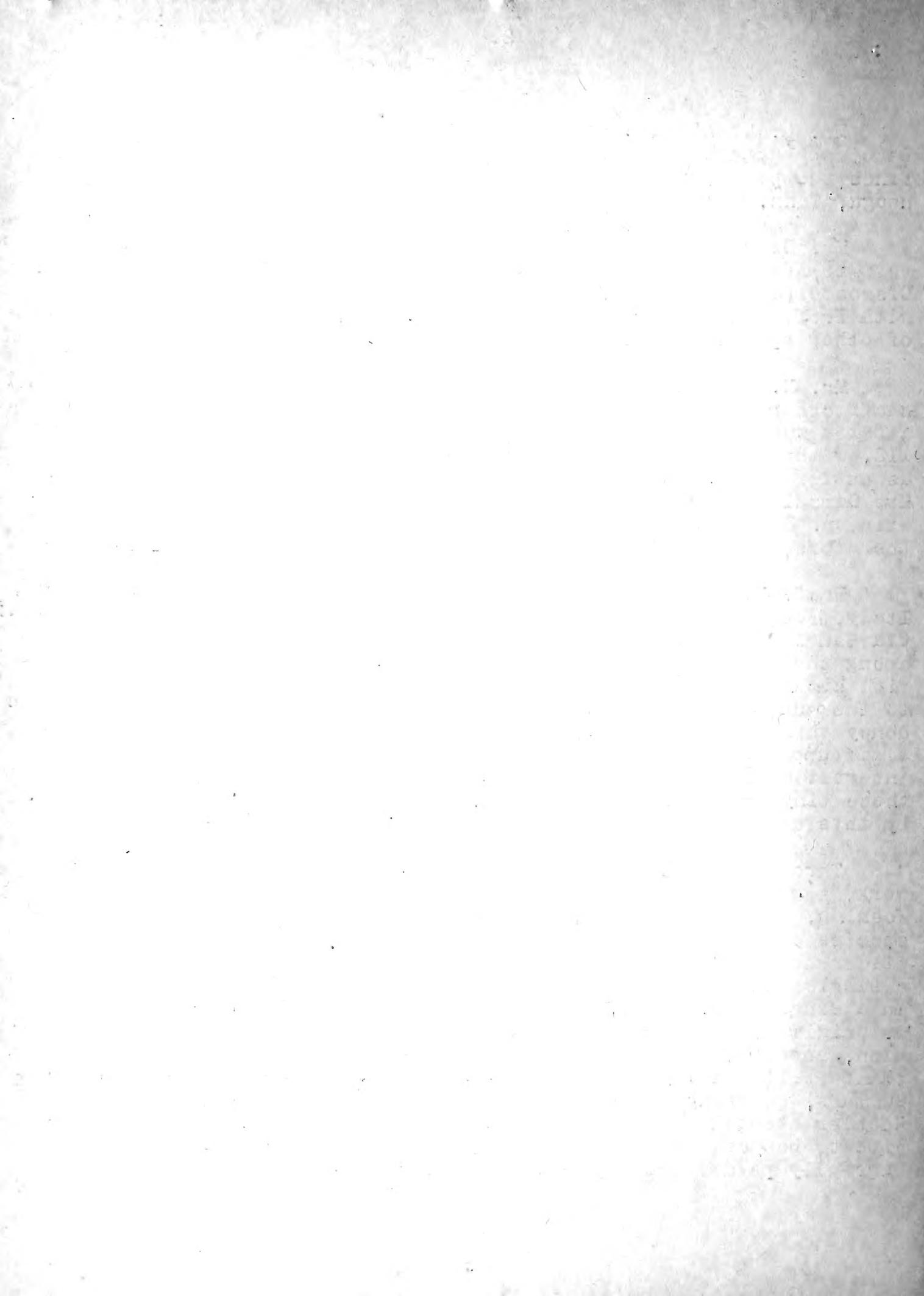
Mr. C. N. Ainslie reports serious ravages to corn in South Dakota by attacks of *Diabrotica longicornis*, while Geo. G. Ainslie finds the pest attacking corn on bottom lands as far south as Chattanooga, Tenn.

Mr. Harrison E. Smith has returned to Wellington, Kans., from his trip to New Mexico where he was sent to study an outbreak of *Dissosteira longipennis*, and has since been working, in cooperation with Prof. Dean of the Agricultural College, in suppressing outbreaks of other species in Kansas.

Mr. N. Kourdumoff, Poltava, Russia, with whom a number of the staff are presumably acquainted, has had the kindness to compare the alfalfa weevil parasites shown in figures 19 and 20, page 37, Bulletin 112, with type specimens and thus has been able to determine them for us as female and male of *Dibrachoides dynastes* Foerster. Further, Mr. Girault has also described the species figured in the same Bulletin, p. 34, fig. 15, as *Anaphoides luna*. Members of the staff can, therefore, correct their copies of this Bulletin accordingly.

Prof. F. Silvestri, R. Scuola Superiore di Agricoltura, Portici, Italy, recently paid Washington a hurried call on his way home to Italy via San Francisco. As illustrating the status of applied entomology among the civilized nations of the world, Prof. Silvestri was carrying with him hundreds of adult hymenopterous parasites belonging largely to the subfamily Opiinae. These were kept in vials and were fed with honey thinned with water. One species which he had obtained was parasitic upon the house fly. American entomologists will be intensely interested in learning what Prof. Silvestri has been able to do with these tiny insects, transported by himself from West Africa to Italy by this unusual method and by such a circuitous route.

Through the instrumentality of Mr. Burgess of the Gipsy Moth work, a number of *Calosoma sycophanta* of both sexes were sent to Koehler, N. Mex., in June, as a basis for an experiment with the species as against the range caterpillar. Under date of July 10, Mr. Wildermuth states that adults feed on *Hemileuca* larvae quite savagely, a single pair eating as high as forty fourth-instar *Hemileuca* larvae in a single day. Also, adults of two other species, *C. calidum* and *C. frigidum*, attack *Hemileuca* larvae. There still seems to be a question, however, whether or not the larvae of *C. frigidum* and *C. sycophanta* will readily attack the *Hemileuca* larvae. Still later, Mr. Summers, carrying out instructions from Mr. Burgess, shipped to Koehler about 200 puparia of *Compsilura concinnata*, a tachinid parasite to be used in experiments to determine if this species will successfully parasitize *Hemileuca* caterpillars.



There appears to have been recently quite a serious outbreak of the big green bug, *Pentatoma sayi*, in New Mexico and Texas, resulting in considerable damage to grain.

Mr. C. Mason, the latest Carnegie student in applied entomology, has recently come to us from England and has started out on his journey of observation over the country. Mr. Mason will visit a number of our field stations to learn what we are doing and how we are doing it, and to that end we wish every one to aid him in any manner possible.

Mr. Vernon King is having his hands full at Charleston, Mo., following out *Horistonotus uhlerii*, which we at first supposed was a species of *Cardiophorus*. This wireworm is quite distinct from other species, in that, while the latter nearly if not quite always selects the lower and damper lands, this species works on the higher and drier lands. It has evidently destroyed corn on such lands over a large area in southeastern Missouri and northeastern Arkansas.

Mr. Luginbill, writing under date of July 3, stated that up to that time he had been able to find no traces of the fall army worm in the vicinity of Columbia, S. C. A few days later he ran across the larvae feeding on corn and crab grass in limited numbers which have since developed adults. This is very evidently the first generation for that point and therefore corresponds very well in date with the serious outbreak that occurred last year in the same locality. Up to the present time none of the force has been able to detect its presence to the westward except Mr. Vickery at Brownsville, Tex. Mr. Vickery, writing under date of July 16, states that the larvae of *Laphygma* were numerous on young corn early in spring but most of them were killed by parasites. He states that during the last three years he has always found the larvae on corn at all seasons and usually very numerous. During March Mr. T. H. Parks searched carefully along the gulf coast from Mobile, Ala., to St. Bernard, La., without finding a trace of the larvae of this species. During the same period Mr. Geo. Ainslie found the larvae attacking corn severely about both Lakeland and Orlando, Fla. This all bears out the conclusion drawn from last year's observations, namely, that the species does not winter much north of central Florida and southern Texas, and that so long as it is controlled by its natural enemies in these localities during winter and early spring, no danger is threatened the country farther northward. Moreover, that the trend of diffusion during seasons of normal abundance is coastwise rather than inland. Evidently the overflow of the Mississippi River has no influence in bringing about an invasion in the lower Mississippi Valley, but may greatly accentuate such an invasion during years of excessive abundance, as was the case last year. Recent observations by Messrs. McConnell and Gibson show that up to this time the pest has not appeared in the delta section of Mississippi.

